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LOUIS H REENS  
ST ONGE STEWARD JOHNSTON & REENS  
986 BEDFORD STREET  
STAMFORD CT 06905-5619

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EXAMINER

LEO, L

ART UNIT

PAPER NUMBER


3743

DATE MAILED: 03/08/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No. <b>09/208,185</b>	Applicant(s) <b>Lemont et al</b>	
Examiner <b>Leonard R. Leo</b>	Group Art Unit <b>3743</b>	

☐ Responsive to communication(s) filed on \_\_\_\_\_.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-6, 16-18, and 21-28 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-6, 16-18, and 21-28 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892 ✓

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3 ✓

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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This application is a Division of serial no. 08/763,483, allowed. Claims 7-15, 19-20 and 29 have been cancelled, claims 1-6, 16-18 and 21-28 are pending.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321<sup>®</sup> may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6, 16-18 and 21-22, and 27-28 are provisionally rejected under the judicially created doctrine of double patenting over claims 7, 19 and 29, respectively of copending Application No. 08/763,483. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows:

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A heat sink for a heat generating device comprising: a heat conducting body and a main air flow passageway.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See In re Schneller, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6 and 23-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang.

Wang discloses a heat sink comprising a heat generating device 50; a base plate 10 having a plurality of spaced rings 30 providing apertures 70; and axial fan 40 mounted in the main air flow passageway; but does not disclose the specific heat transfer coefficient generated.

The specific heat transfer coefficient generated is considered to be an obvious design expedient, producing no new and/or unexpected results and solving no stated problem.

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Clearly, the heat transfer coefficient is dependent on several variables such as temperature difference, heat transfer coefficient of the body material, air velocity, etc.

Regarding claim 4, the radial inflow of air comprises 100% of the main air flow.

Regarding claims 6 and 26, the rings extend from the base plate, albeit not in a "perpendicular" direction.

Claims 5, 16-18, 21-22 and 27-28 are rejected under 35 U.S.C. § 103 as being unpatentable over Wang in view of Minakami et al.

The device of Wang lacks a heat conducting column.

Minakami et al discloses a heat sink (Figure 34) comprising a heat generating device underneath base plate 72 having a plurality of spaced rings 12j mounted on heat pipe 73 for the purpose of aligning the rings and improving heat exchange.

Since Wang and Minakami et al are both from the same field of endeavor, the purpose disclosed by Minakami et al would have been recognized in the pertinent art of Wang.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Wang rings mounted on a heat pipe for the purpose of aligning the rings and improving heat exchange for the purpose of as recognized by Minakami et al.

Regarding claims 17 and 25, the axial spacing of the rings 30 of Wang are gleaned to be about 25% of the fan propeller radius.

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Claims 1-6, 16-18 and 21-28 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the recitations of "the average ring chordal dimensions" in line 11, "the total mass flow" in line 15 and "the axial width" in line 19 lack strict antecedent basis. Further, it is suggested -- said -- be inserted before "heat" in line 14.

Regarding claim 2, it is suggested -- said -- be inserted before "flow" in line 1.

Regarding claim 4, it is suggested both occurrences of "an" in line 2 read -- said --.

Regarding claim 16, the recitations of "the axial width" in line 15 and "the average plate chordal dimensions" in line 18 lack strict antecedent basis. Further, it is suggested -- said -- be inserted before "heat" in line 14.

Regarding claim 23, the recitation of "the spacing" in line 8 lacks strict antecedent basis. Further, it is suggested -- an -- be inserted before "axially" in line 3 and "these" in line 7 read -- said --.

Regarding claim 25, the recitation of "the axial ring spacings" in line 2 lacks strict antecedent basis.

Regarding claim 26, the recitations of "the average ring chordal dimensions" in line 11 and "the axial width" in line 18 lack strict antecedent basis. Further, it is suggested -- said -- be inserted before "heat" in line 14.

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Regarding claim 27, the recitations of "the average ring chordal dimensions" in line 10 and "the axial width" in line 18 lack strict antecedent basis. Further, it is suggested -- said -- be inserted before "heat" in line 13.

The device of Wang meets the instant invention as claimed, since the claims merely recite a "radially inwardly induced flow" which delivers a "main flow of air along an axial direction". However, a recitation with respect to the air flowing toward the "base plate" and "heat generating device" or a "primary main air flow" and "secondary induced air flow" would define over Wang.

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Any inquiry concerning this communication should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 3700 receptionist whose telephone number is (703) 308-0861.



LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3743

February 28, 1999